

REMARKS/ARGUMENTS

Claims 18, 21 to 31 and 33 to 52 remain in this application. Claims 1 to 17 were previously withdrawn for being directed to non-elected Group I drawn to an embossing tool. Claims 1 to 17, 19, 20 and 32 have been cancelled, without prejudice to submitting in a continuing application.

Claims 18, 30 and 31 have been amended. Claims 46 to 52 have been added. Support for the amendment to claim 18 and the new claims is found at page 1, lines 11 to 13; at page 9, lines 3 to 7; in the carryover paragraph on pages 9 and 10; in Example One and Two on pages 14 and 15; and in Figures 1 and 4, for example. The amendments to claims 30 and 31 improve definiteness.

Claims 21 to 30, 42 and 45 are presently withdrawn for being directed to non-elected Species I in which the slurry is printed directly onto the article. Claims 18, 31, 33 to 41, 43 and 44 are directed to Species II and have been examined. New claims 46 to 52 are readable on Species II and must be examined.

Claim 18 was previously amended and is presently generic to Species I and II. Claim 18 is directed to a method of mechanically embossing an article comprising pressing a solidified slurry into the article, the solidified slurry being recyclable and reusable. Claims 43 and 46 to 48 depend on claim 18 and are also generic to Species I and II. If claim 18 is found to be allowable, claims 21 to 30, 42 and 45, which are directly or indirectly dependent on claim 18 must be considered and allowed.

New formal drawings have been submitted herewith, correcting the objections noted by the Draftsperson. Therefore, the objections have been met.

A clerical error in last line of Table 1, on page 8, has been corrected. The first full paragraph on page 11 has been amended to include a reference to cooling rolls 20, shown in Figure 3, as originally filed. The title has been changed to be more descriptive in view of the cancellation of claims 1 to 17.

The Examiner has rejected claims 18, 31, 33, 35 to 41, 43 and 44 as being obvious in view of the admitted prior art and Brenot et al. However, a careful reading of Brenot et al. shows that Brenot et al. use the terms “mold” and “die” as synonyms. Every time Brenot et al. uses the term “die” or “dies” it is in association with the term “mold” or “molds” and the terms are connected with the conjunction “and” or “or” in each instance.

The only place in which the usage is not symmetrical is at column 1, line 8. However, this is an obvious clerical error. The invention does not relate “to a continuous flow process of mold-mixture or die-making using a reusable bondable mixture substance to make selected finished products.” (Emphasis supplied.) The term “mold-mixture” appears nowhere else in Brenot et al. Obviously, the invention is directed “to a continuous flow process of mold-[making] or die-making using a reusable bondable mixture substance.” The phrase “mold-making or die-making” is used in Brenot et al. 9 times; the phrase “mold or die making” is used 3 times; the phrase “mold or die making process” is used 3 times; the phrase “make said molds or dies” is used 2 times; the phrase “making said molds or dies” is used 3 times; and the phrase “making molds or dies” is used 10 times. The phrases “making the molds or dies” and “making permanent molds or dies” are both used once. The Examiner appears to take the position that a die is a tool used to emboss by pressing the die into a material. The Examiner’s attention is drawn to

page 628 of Webster's Third New International Dictionary Unabridged, published in 1971 by G. & C. Merriam Co., where "die" is defined as:

"*6 pl dies* : any of various tools or devices for imparting a desired shape, form, or finish to a material; as **a** (1) : one of a pair of cutting or shaping tools that when moved toward each other produce a certain desired form in or impress a desired device on an object by pressure or by a blow, this tool being the larger of the pair or the part into which the punch enters . . . **d** : the mold in which a die casting, a powdered-metal casting, or a drop forging is made."

(Emphasis supplied.) The Examiner is confusing "die" with "punch." Brenot et al. does not teach or suggest a punch made from a solidified slurry. Brenot et al. uses the term "die" as defined by Webster to be synonymous with "mold."

As indicated at column 1, lines 8 to 12, the mold or die is used "to make finished products including shingles for building structures, sidings, synthetic logs, panels, brick, stone, block, and lumber, all replicating wood." While these products can be made by pouring a liquefied hardenable material into a mold or die, as taught by Brenot et al., it is not evident how these products can be made with a punch. While these products can be embossed with an embossing die and punch, there is no teaching or suggestion in Brenot et al. of embossing. Brenot et al. teaches a molding process and not an embossing process.

There is no teaching or suggestion in Brenot et al. of pressing a solidified slurry into an article, as presently claimed. To the contrary, at column 3, lines 26 and 27, Brenot et al. teach a "dispenser for dispensing the liquidfied hardenable material onto the molds or dies;" and at column 4, lines 37 and 38, "The liquidfied hardenable material fills in the impressions made in the end-to-end molds or dies."

Brenot et al. clearly teaches

“providing . . . an impressionable and bondable mixture substance used to make the molds or dies; . . . making the desired or selected impressions . . . into the substance using impression-making rollers or drums; . . . and delivering the generally-granulated mixture substance back to the beginning of the process to a holding bin for use in making the molds or dies.”

(Column 1, lines 41 to 67, emphasis supplied.) At column 2, line 65, to column 3, line3, Brenot et al. teach “a reusable impressionable mixture substance [is] provided . . . for producing different types of molds and dies.” (Emphasis supplied.)

Nowhere does Brenot et al. teach solidifying the impressionable material. If the Examiner disagrees, he is respectfully requested to point out where in Brenot et al. there is a suggestion to solidify the impressionable material or support his position with a reference or affidavit, as required by 37 CFR 1.104(d)(2).

Brenot et al. teaches away from the present invention. How can an impressionable material, which has not been solidified, be used as an embossing tool that is pressed into an article? Brenot et al. clearly teaches forming the impressionable material and pouring a hardenable material into the depression formed in the impressionable material and not pressing a solidified slurry into the material.

Further since Brenot et al. does not teach or suggest solidifying the impressionable material, it does not teach or suggest one of the specific limitations of the present claims. Therefore, the claims are allowable over Brenot et al.

The Examiner is using improper hindsight reasoning to extrapolate a solidified embossing die that is pressed into an article from the mold or die formed from impressionable material of Brenot et al. into which a hardenable material is poured. Therefore, claim 18, which requires “pressing a solidified slurry into the article,” is allowable over Brenot et al. or the combination of the admitted prior art and Brenot et al.

Since all of the claims remaining in the application, including the withdrawn claims, depend directly or indirectly on claim 18, all of the claims must be allowed.

Claim 31 requires mechanical embossing of the article with the solidified slurry embossing tool. Brenot et al. fails to teach or suggest embossing. Rather, it teaches forming a mold or die with an impressionable material and filling the mold or die with a liquefied hardenable material. Therefore, claim 31 is allowable over Brenot et al. for this reason as well.

With regard to claim 34, the Examiner takes the position that it would have been well within the purview of one of ordinary skill in the art at the time the invention was made to apply the slurry material to the first conveyor belt in the shaped pattern using a technique such as screen printing, as direct pattern techniques such as screen printing are well known to the art for applying a slurry in a controlled pattern. Attorney for Applicants respectfully disagrees.

Brenot et al. teach applying a uniform layer of the slurry material to the conveyor belt and then forming molds or dies in the slurry material with a roller or drum. See column 3, lines 15 to 27, for example. It would not be obvious to apply the slurry material with a screen printer, which leaves portions of the backing free of slurry material, and then leveling the material with “levelers or graders 4 [to form the impressionable material] to a predetermined depth and consistency,” column 3, lines 18 to 22.

If the Examiner disagrees, he is respectfully requested to point out where in Brenot et al. there is a suggestion to apply a slurry to a backing with portions of the

backing free of slurry material, as would occur with a screen printer or support his position with a reference or affidavit, as required by 37 CFR 1.104(d)(2).

Claims 43 and 44 require the article to be a surface covering. New claims 51 and 52 require the surface covering to be a floor covering. While the admitted prior art is directed to mechanically embossing surface coverings, including floor coverings, it is not obvious why one of ordinary skill in the art would substitute the impressionable slurry material of Brenot et al. for the metal embossing tools of the prior art that are pressed into a surface covering to displace the material of the surface covering and emboss the surface covering.

The Examiner is respectfully requested to point out where in Brenot et al. there is a suggestion to press the impressionable slurry into an article or support his position with a reference or affidavit, as required by 37 CFR 1.104(d)(2). Otherwise, claims 43, 44, 51 and 52 are allowable over the admitted prior art in view of Brenot et al.

New claim 46 requires the solidified slurry to be in direct contact with the article that it is pressed into the article. Not only does Brenot et al. not teach or suggest pressing the impressionable material into the article, it requires a plastic sheet to be interposed between the impressionable material and the hardenable liquid. Therefore, claim 46 is allowable over Brenot et al. for this reason as well.

New claims 47 and 48 require the portion of the article into which the solidified slurry is pressed to be gelled or cured prior to the pressing. There is no teaching or suggestion in Brenot et al. of gelling or curing the hardenable liquid material prior to applying it to the plastic covered impressionable material molds or dies. Brenot et al. teach filling the mold or die with the hardenable liquid material and then curing the

hardenable liquid material. Therefore, claims 47 and 48 are allowable for this reason as well.

New claim 49 requires the backing, onto which the solidified slurry is applied, to have a textured surface. Brenot et al. neither teaches nor suggests this feature. Therefore, claim 49 is allowable over Brenot et al. for this reason as well.

New claim 50 requires portions of the backing to be free of the solidified slurry. Brenot et al. neither teaches nor suggests this feature. Therefore, claim 50 is allowable over Brenot et al. for this reason as well.

Claim 36 has been rejected over the admitted prior art and Brenot et al. in view of Moore et al. The Examiner looks to Moore et al. for a teaching of a biodegradable binder. Attorney for Applicants does not dispute the teachings of Moore et al. However, since claim 36 depends on allowable claim 18, it is allowable as well.

Applicants submit that all of the claims are in a condition for allowance and that claims 21 to 30 and 42, which depend directly or indirectly on allowable generic claim 18 and are drawn to the unelected Species I, must be considered. Therefore, early consideration and allowance are respectfully requested.

Respectfully submitted,

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Date

Douglas E. Winters

Reg. No. 29,990

Attorney for Applicants

Armstrong World Industries, Inc.
P.O. Box 3001
Lancaster, PA 17604
(717) 396-4070 (Telephone)
(717) 396-6121 (Facsimile)

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April L. Fiedler